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Research Paper

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ABSTRACT

The Co-operative Bank of Kenya has partnered with Deposit-Taking Savings and Credit Cooperative Societies (SACCOs) in Kenya to allow their members access to Co-operative Bank automated teller machines (ATMs) via Saccolink debit cards. However, the adoption and utilization of debit cards has opened financial institutions to fraud associated with the use of debit cards for transactions on automated teller machines and point-of-sale terminals. Given this limitation, this study sought to investigate the effect of Saccolink debit card services on the financial performance of Deposit-Taking SACCOs in Kenya. Through a combination of agency, information systems success models, and task-technology fit theories to explain financial performance, the study found a positive effect of Saccolink debit card services on the financial performance of Deposit-Taking SACCOs in Kenya. The study therefore recommends continued utilization of Saccolink debit cards and an enhancement of their features within the Deposit-Taking SACCOs in Kenya.

Keywords

Debit Cards, Sacoolink, SACCO, Financial Performance, Information Systems

1. INTRODUCTION

The performance of organizations has been of great interest in academic research. According to Alam, Raza, and Akram (2011), organizational performance is a naturally multidimensional construct comprising of four elements: financial and market performance (e.g., profitability and market position), human resource performance (e.g., employee satisfaction), organizational effectiveness, and customer-focused performance. To evaluate the organizational performance, one has to consider the nature of an organization and the reasons for which its performance is being evaluated to appropriately select the applied dimension or element when determining the performance of that organization (Alam et al., 2011).

According to Sink and Tuttle's (1989) model, organizational performance is described as the interplay of various components. These components include innovation, effectiveness, efficiency, quality of work life, productivity, and profitability. According to Kaplan and Norton's (1996) Balanced Score Card, the performance measurement of organizations should include both financial and non-financial measures complementary to each other to reflect past organizational performance and to predict future performance. Alam et al. (2011) noted that financial organizations strive to maximize their returns while reducing the risks associated with the return-earning process. This is in line with financial stewardship theories that postulate that organizations exist to maximize their value. Agency theory, an important financial stewardship theory, suggests that the maximization of shareholders' value should be the driving force for stewards as they make various financial decisions regarding how financial institutions should run (Clarke, 2004). Organizations must therefore endeavor to generate adequate proceeds to cover their day-to-day operational costs and make extra profits as expected by their shareholders.

Most financial organizations concentrate on profitability ratios such as return on assets (ROA) and return on equity (ROE) to evaluate their performance. To address challenges of financial performance, financial institutions have opted for the integration of innovations (particularly information and communication technologies) to streamline their operations (SASRA, 2013; Stoica, Mehdian & Sargu, 2015). Information technology has revolutionized the conduct of business operations through automation and communication (via new interaction channels) and has provided new business channels to offer services and products to organizations' clients, employees, and other stakeholders (Godse, 2005). Mobile technology services such as mobile banking, mobile communication, mobile web services, and credit card and debit card services are some of the information and communication technologies adopted and utilized by financial institutions to improve their financial performance.

Information systems research has largely dwelt on the drivers of mobile technology services adoption based on utilization theories (e.g., technology acceptance and information systems success models among others) with an assumption that organizational performance improvements will be felt after the adoption. As a result, existing studies on mobile technology services have largely focused on determinants of adoption and usage intentions without delving into the effect of these mobile technology services on organizational performance (Gebauer, Shaw & Gribbins, 2010; Yuan, Archer, Connelly & Zheng, 2010). However, some studies have established that the adoption of information and communication technologies may not automatically translate to improved organizational performance and may even expose an organization to more risks than before (Malhotra & Singh, 2009; Francesca & Claeys, 2010; Willy & Obinne, 2013).

1.1 Saccolink Debit Card Services

The Co-operative Bank of Kenya has partnered with Deposit-Taking SACCOs in Kenya to allow their members access to Co-operative Bank ATM machines using Saccolink debit cards (Co-operative Bank of Kenya, 2008). The Saccolink debit card is a product of the Co-opswitch project, which was started to provide individual members of SACCOs with real time, online banking connectivity to Co-operative Bank of Kenya. In the arrangement, SACCOs were supposed to pay for connectivity, upgrades of their software, and a bridging service to connect to the Co-operative Bank system. Using the Saccolink debit card, SACCO members can now interact with their Front Office Services Activity (FOSA) accounts using Co-operative Bank-operated ATM machines to withdraw their cash, perform deposits, make utility payments, obtain account statements, balance enquiry, and other transactions (Co-operative Bank of Kenya, 2008; SASRA, 2013; Wachira, Muturi & Sirma, 2014). These debit cards are Visa-branded, making it possible for SACCO members access their money at any VISA-branded ATMs at normal Visa charges and at any Point of Sale (POS) or Co-operative Bank agents.

SASRA (2013) indicated that, as of December 2012, 139 licensed Deposit-Taking SACCOs had already connected to the SACCO Link system allowing SACCO members to enjoy an array of financial services using their Saccolink debit cards. Ogola (2014) found out that all sampled SACCOs had already connected to the Saccolink system. The study additionally indicated that SACCOs had adequate ICT infrastructure to support the system with additional reserve capacity for increased resource demands. Addressing performance implications associated with Saccolink system and ATM technology is a critical step to formulating necessary policies on these technologies, especially given the increased cases of fraud indicated by Chiezey and Onu (2013) and Kroll (2013).

1.2 Deposit-Taking SACCOs in Kenya

The financial sector comprises players from the banking industry, microfinance institutions, capital markets, insurance companies, savings and credit cooperative societies (SACCOs), mutual funds, and development finance institutions each playing a role in the provision of diverse financial solutions. A SACCO system is a type of credit union owned by members sharing a common interest in mobilizing savings to facilitate credit and other financial services to themselves (World Council of Credit Unions, 2013). Credit unions evolved from the cooperative activities of the early 19th century from the idea that people could pool their money and make loans to each other. The first of these cooperatives emerged in Germany and England before spreading to other countries.

A SACCO system encompasses a mutual agreement and membership that pools members' voluntary savings in the form of shares. The shareholders are brought together by a common interest or purpose (e.g., marketing their products, empowering themselves financially, or improving their livelihoods among other interests). In most cases, shareholders are connected by background, such as their employment, community, geographical area, or any other affiliation. SACCOs differ from other financial institutions in the sense that they only offer credit and savings services to their members. SACCOs also differ from other philanthropic organizations by only benefiting their members while excluding the public (Makori, Munene & Muturi, 2013).

The SACCO subsector in Kenya comprises of Deposit-Taking and non-Deposit-Taking SACCOs. Deposit-Taking SACCOs are licensed, supervised, and regulated by the SACCO Societies Regulatory Authority (SASRA) under the SACCO Societies Act of 2008 (Mumanyi, 2014). Unlike non Deposit-Taking SACCOs, Deposit-Taking SACCOs Deposit-Takingoffer front office services activities (FOSA) allowing them to provide simple banking services to their members/customers (e.g., taking deposits,

payment services, automated teller machines, and other quasi banking services), thus improving their working capital.

Based on their membership, Deposit-Taking SACCOs are categorized into teacher-based, government-based, farmer-based, private institution-based, and community-based SACCOs (SASRA, 2013). The majority of the members of government based SACCOs comprise employees of government ministries, departments, state corporations, public universities and colleges, and county governments. For farmer-based SACCOs, the majority of the members are farmers engaged in different agricultural activities (both direct and indirect) in various parts of the country. Private institution-based SACCOs, meanwhile, have members who are mainly employees of private organizations, including Non-Governmental Organizations (NGOs) operating in Kenya. Community-based SACCOs have members who are mainly residents of a given geographical area engaged in a productive economic activity, while teacher-based SACCOs have memberships mainly drawn from employees of public/private schools, colleges, and universities (both public and private).

Deposit-Taking SACCOs account for three quarters of the SACCO subsector's assets, deposits, and membership (SASRA, 2013). Sub-Saharan Africa remains the region with the lowest Deposit-Taking institutions penetration in the world, standing at an average of 16.6 percent compared to 63.5 percent in developed countries. Therefore, there is a need to have Deposit-Taking SACCOs to fill this gap (Savings Plus, 2010). In line with the Kenya's Vision 2030 strategy (which requires financial organizations to increase savings and mobilize more investments for the economic growth and development of the country) Deposit-Taking SACCOs' role in the Kenyan economy remains paramount (Government of Kenya, 2013). By the year 2009, out of the 20 million adult people in Kenya, 22.5 percent were served by commercial banks and microfinance institutions (MFIs) while 17.6 percent were served by SACCOs, marking SACCOs as a key player in Kenya's financial sector (Matumo, Maina & Njoroge, 2013).

1.3 Statement of the Problem

Kenya's Vision 2030 under the economic pillar requires a vibrant and stable financial system to mobilize savings and allocate resources more efficiently in the economy (Government of Kenya, 2013). Deposit-Taking SACCOs are expected to play a key role towards the realization of this vision, especially by connecting people who have been financially excluded by major banks. Despite their role in the economy, Deposit-Takingtaking SACCOs continue to face a number of performance challenges. They face stiff membership competition from other Deposit-Taking institutions, particularly commercial banks (Matumo *et al.*, 2013; SASRA, 2013). They also experience efficiency challenges characterized by poor information delivery channels and high operational costs due to inadequate information and communication technologies (Mugambi, Njeru, Memba & Ondabu, 2015). In addition, they face high demands for loans they are unable to meet due to liquidity shortages, hence compromising their profitability (especially given that they cannot seek credit from the Central Bank of Kenya (CBK) like other commercial banks) (SASRA, 2014; Mugambi *et al.*, 2015).

SASRA (2013, 2014) noted that many SACCOs had not yet managed to comply with capital adequacy ratios, including core capital to total assets and core capital to total deposits liabilities. Athanosoglou, Brissimis, and Delis (2005) established that low capital adequacy can negatively impact organizational profitability. Deposit-Takingtaking SACCOs additionally experience the challenge of non-performing loans, which were recorded at 4.7 percent in 2013 and 5.73 percent in 2014 – a situation that can negatively affect their liquidity and, eventually, their profitability (SASRA, 2014).

Challenges faced by SACCOs have required them to adopt and utilize Saccolink debit card services. Although various scholars have asserted that Saccolink debit cards services have the potential to enhance financial performance (Adewoye & Omoregie, 2013; Ngango, Mbabazize & Shukla, 2015), other studies have indicated otherwise (Ngumi, 2013). Further, some studies have indicated increased incidences of fraud associated with debit cards and automated teller machines which may negatively affect the financial performance of financial institutions (Adepoju & Alhassan, 2010; SASRA, 2011). These mixed conclusions have created a need to carry out a study from a Kenyan context to establish the effects of Saccolink debit card services on financial performance of Kenyan Deposit-Takingtaking SACCOs.

1.4 Objectives

The general objective of the study was to establish the effect of Saccolink debit card services on the financial performance of Deposit-Takingtaking SACCOs in Kenya. Specifically, the study investigated the effects of various Saccolink debit card services, including cash withdrawal, deposits, account statements, bill payments, and balance enquiry regarding the financial performance of deposit-taking SACCOs in Kenya.

2. LITERATURE REVIEW

2.1 Theoretical Models

The study was anchored on three theories. Agency theory was used to explain financial performance. The information systems success model was used to link the utilization of information systems to the realization of organizational benefits. The task-technology fit theory was used to explain the compatibility expected between the nature of tasks and mobile technology services for organizational benefits to be realized.

2.1.1 Agency Theory

SACCOs' management boards have a duty to run the SACCOs in such a way as to maximize the long-term returns to members. An important theory in explaining the relationship between the principal and their agents, agency theory (Jensen & Meckling, 1976) can be used to explain how the relationship between SACCO members and management boards can be harnessed to address SACCOs' financial performance. Agency theory revolves around the principal who hires an agent and delegates decision-making to the agent. The prominence of agency theory in explaining the financial performance of organizations is influenced by simply reducing an organization into two participants, the managers (agents) and the shareholders (principals), and also the notion of human beings as self-interested parties (Daily, Dalton & Canella, 2003).

2.1.2 Information Systems Success Model

The measurement of an information system's success is crucial in justifying its adoption and continued use. It was for this purpose that DeLone and McLean (1992) proposed an integrative model for conceptualizing and operationalizing information system success factors. According to this model, the success of information systems is determined by the information system's quality (i.e., the technical quality of the system) and the output quality of the information system (i.e., information quality). Systems quality deals with the success of an information system at the technical level by focusing on the desired characteristics of the information system producing the information. Information quality focuses

on the information product at the semantic level or the success of information in conveying the intended meaning. These dimensions are linked indirectly to information system's effects on individuals and organizations.

The model was later modified to suit research on electronic commerce by indicating how net benefits can be obtained from information systems (DeLone & McLean, 2004). In the updated model, service quality was added as an important dimension. Additionally, individual and organizational effects arising from the use of information systems were combined into one dimension: the net benefits. In the updated model, net benefits from information systems arise from addressing five success categories of dimensions. These success categories are linked casually and temporally, as success is viewed as a dynamic process instead of a static state (Yusof, Kuljis, Papazafeiropoulou & Stergioulas, 2008). The success categories include system quality, information quality, service quality, information use, and user satisfaction as shown in Figure 1.

The various success dimensions captured in Figure 1 have to be addressed in the adoption stage of various mobile technology services in order to realize the net benefits within organizations. Therefore, since the study investigated the net benefits (benefits of mobile technology services to performance of SACCOs), the adoption of mobile technology services must first take place. The study assumes that the system quality (quality features of mobile devices), information quality (completeness and accuracy of information generated from mobile technology applications) and service quality (excellence in the way business processes are performed using mobile technology services in the organization) have been addressed, as mobile technology services are already adopted by organizations. The gap that remains is to link usage of these mobile technology services to net benefits - a gap this study sought to fill. Therefore, the updated Delone and McLean (2004) information systems success model was the main model upon which this study was anchored on.

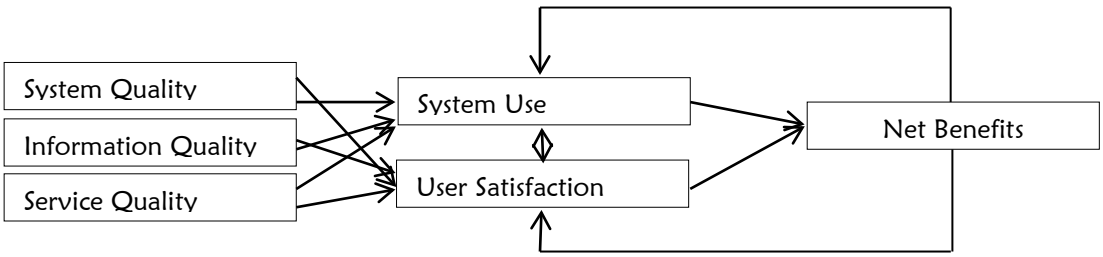

Figure 1: Updated DeLone and McLean Information Systems Success Model

Source: DeLone and Lean (2004) pg. 33.

2.1.3 Task-Technology Fit (TTF) Theory

Two versions of task-technology fit theory have emerged with time. The first version initiated by Goodhue and Thompson (1995) established task-technology fit to be an important concept in assessing and explaining the information system's success. This variant focused on the individuals' use of information systems and presented a primarily positivistic research approach applicable to information systems in general (Goodhue & Thompson, 1995). The second version by Zigurs and Buckland (1998) developed a systematic profile for the task-technology combination of group tasks and group support systems (GSS). This second variant focused on groups' use of information systems and formulated fit profiles applicable specifically to the utilization of GSS (Zigurs & Buckland, 1998). The discussion presented here is based mainly on the version by Goodhue and Thompson (1995) as depicted in Figure

2. Task-technology fit is a key theory, though often overlooked in understanding the effects of technology on individual performance and, by extension, the organizational performance (Goodhue & Thompson, 1995). In this theory, technologies are viewed as tools individually used to carry out tasks defined as "the actions carried out by individuals in turning inputs into outputs" (Goodhue, 1995; p. 1828). The model proposes a link between task-technology fit and utilization of a technology and a link between task-technology fit to performance impacts.

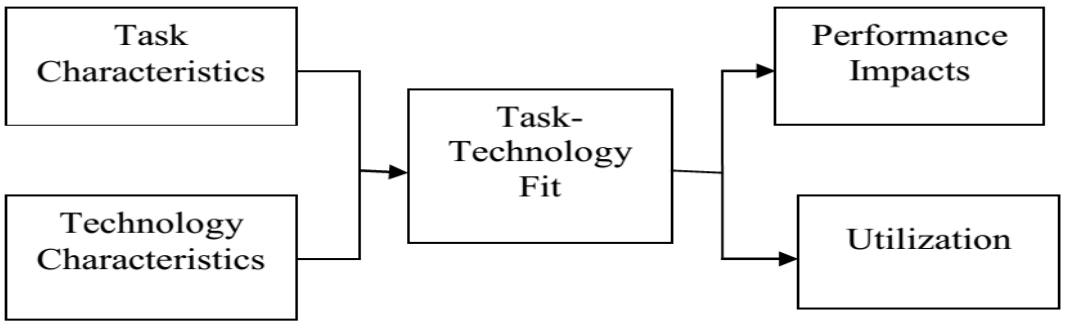

Figure 2: Task-Technology Fit Model

Source: Goodhue and Thompson (1995) pg. 225.

Goodhue and Thompson (1995) assert that information and communication technologies will enhance individual and organizational performance if the functionalities of the technology conform to the attributes of the tasks intended to be performed by users within an organization. Task-technology fit to assist an individual in performing his or her tasks must exist for successful benefits. Specifically, Goodhue (1997) asserts that fit among task requirements, individual abilities, and the functionality and interface of the technology are a requisite for realization of tangible benefits from a given technology.

Using task-technology fit model, in order for mobile technology services to have a positive effect on organizational performance, mobile technology services must be utilized and be a good fit with the tasks the mobile technology supported services (Goodhue & Thompson, 1995). Therefore, the model requires that mobile technology services be compatible with the individually performed tasks for performance outcomes to be realized. Other than compatibility, other factors that determine the level of task-technology fit include ease of use/training, quality, authorization, production timeliness, systems reliability, accessibility, and relationship with users (Goodhue & Thompson, 1995).

Several studies conducted to validate the use of task-technology fit theory in the study of mobile information systems have indicated a positive relationship between task-technology fit and performance (Perry, O'Hara, Sellen, Brown & Harper, 2001; Staples & Seddon, 2004; Junglas & Watson, 2006). However, previous studies have focused mainly on the adoption and functionality of mobile information systems among individuals and not its effects on organizational performance. It becomes, therefore, necessary to assess the applicability of this theory to mobile technology services, mobile use contexts and their performance impacts, and to carefully determine the need for theory adjustments and extensions as suggested by Junglas and Watson (2006).

2.2 Empirical Literature

In a study by Adepoju and Alhassan (2010), it was found that customers have come to depend on and trust ATMs to conveniently meet their banking needs. However, it was found that use of debit cards has led to the proliferation of ATM fraud both in Nigeria and globally. Financial institutions however continue to adopt and offer debit cards for use by their account holders to access their funds and perform financial transactions such as checking balances from ATMs amidst increasing incidences of fraud (Adepoju & Alhassan, 2010; Jegede, 2014). This raises questions on whether financial institutions that have provided these cards to their members are improving their overall performance amidst this emerging risk, a concern this study sought to address in the context of deposit-taking SACCOs.

In the context of Kenyan commercial banks, Nyangosi and Arora (2011) found that ATM technology was the most utilized technology, although some banks were at the initial stages of adopting ATM technology. Debit cards are used on these ATMs and, as a result, they improve the management of customer information, hence enabling flexible and enhanced banking services (Nyangosi & Arora, 2011). Since their study was contextualized in commercial banks, this study was conducted to evaluate the utilization and effects of debit cards on other forms of financial institutions.

Ngumi (2013) found that debit cards were not statistically significant towards improving the financial performance of banks due to their association with fraud incidences, causing financial institutions to incur losses. However, Jegede (2014) found that the deployment of ATM terminals had on average improved the performance of Nigerian banks despite the alarming rate of ATM fraud. Given the fraud incidences associated with the use of debit cards to perform banking transactions on ATMs, it was worth investigating the effect of these ATMs and debit cards on SACCOs' performance.

Adewoye and Omoregie (2013) noted that use of ATMs and debit cards led to cost efficiency measured in terms of cost-to-income ratio and asset management rate in commercial banks in Nigeria. Their study used secondary data involving a sample of 22 commercial banks to recommend the continued deployment of ATMs and debit cards by commercial banks to improve overall efficiency. The study also recommended the continued deployment of other performance-improving ICTs in which management should be actively engaged. Given that the study was conducted in Nigeria, it would be important to conduct a similar study on ATMs and debit cards in a different context. This study was therefore conducted for comparison purposes necessitated by contradicting findings regarding the effects of ATMs and debit cards on institutional performance.

In another study on electronic banking and the performance of commercial banks, Ngango, Mbabazize, and Shukla (2015) found that electronic banking systems like ATMs, pay direct, electronic check conversion, mobile telephone banking, and electronic transactions had a great impact on bank performance due to increased profitability, reduced operation costs, and increased assets and efficiency. Their study however employed a weak descriptive research design by basing it on qualitative and quantitative approaches to data collection. This study was based on both descriptive and explanatory research designs to improve validity.

2.3 Research Hypotheses

The following research hypotheses guided the study:

i. There is no effect of cash withdrawal services on the financial performance of Deposit-Taking SACCOs in Kenya.

ii. There is no effect of deposits services on the financial performance of Deposit-Taking SACCOs in Kenya.

iii. There is no effect of account statement services on the financial performance of Deposit-Taking SACCOs in Kenya

iv. There is no effect of bill payments services on the financial performance of Deposit-Taking SACCOs in Kenya

v. There is no effect of balance enquiry services on the financial performance of Deposit-Taking SACCOs in Kenya

2.4 Conceptual Framework

The study proposed that the financial performance of Deposit-Taking SACCOs is affected by Saccolink Debit Card services including cash withdrawal services, deposit services, account statements, bill payments services, and balance enquiry services as indicated in Figure 3.

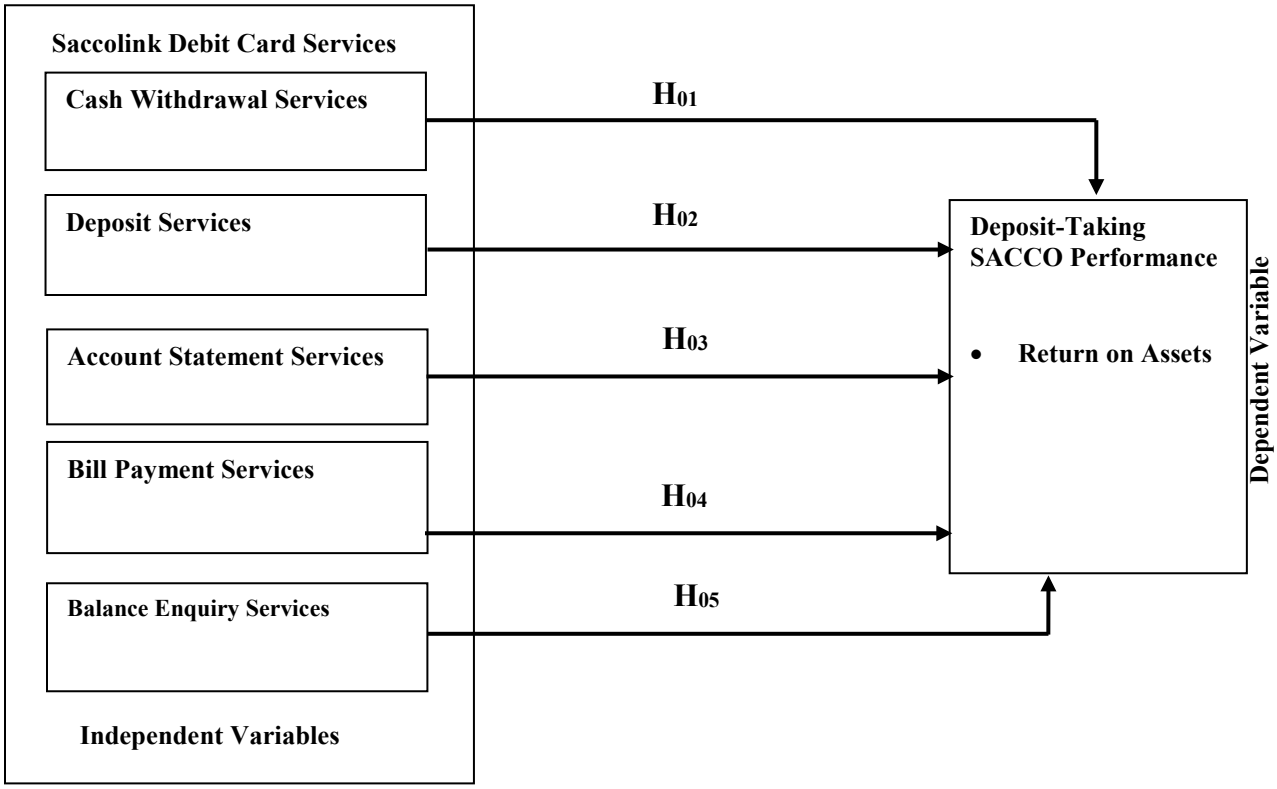

Figure 3: Conceptual Framework Depicting Relationship between Saccolink Debit Card Services and the Performance of Deposit-Taking SACCOs

3. METHODOLOGY

This study was guided by the positivism paradigm. It was an ideal philosophy for this study as scientific processes were followed in the formulation of the hypotheses and in the deductions of the observations in order to determine whether to reject the formulated hypotheses as recommended by Mack (2010).

According to Sekaran and Bougie (2009), there is no single perfect research design, hence the usage of both descriptive surveys and explanatory research designs to achieve optimal results.

In order to obtain the data necessary to draw inferences, the target population included those Deposit-Taking SACCOs that had existed for at least three years since their being licensed. Therefore, the study targeted the 110 Deposit-Taking SACCOs that licensed in Kenya as of December 31st, 2011. To select an optimum sample of 86 Deposit-Taking SACCOs from which data was collected, a simple random sampling method was used. This method ensured that each Deposit-Taking SACCO had an equal chance of being selected as suggested by Mugenda and Mugenda (2003). Random sampling was also found suitable by Acharya, Kagan, Lingam, and Gray (2008), who conducted a study to establish website usability impacts on bank performance.

From each Deposit-Taking SACCO, two managers from information technology and finance departments were purposively sampled as study respondents via self-administered, structured questionnaires. Mugenda and Mugenda (2003) contend that a researcher can purposefully select respondents he/she considers to either have the required information or the capability to provide credible responses. The respondents selected were believed to be conversant with the utilization of Saccolink debit card services within the SACCO and their effect on SACCO's performance. They were therefore in a position to provide credible responses necessary to make valid conclusions regarding the study objectives.

Deposit-Taking SACCOs in Kenya are required by SASRA to publish their financial statements. Secondary data was therefore collected from these statements and from SACCOs' annual supervision reports were obtained from SASRA headquarters. Before the collection of secondary data was undertaken, permission was officially requested through an official letter sent to the Chief Executive Officer (CEO) of SASRA. The data covered five years (2010, 2011, 2012, 2013, and 2014) and included annual data on return on assets.

3.1 Empirical Model

Multiple linear regression analyses were conducted to establish the effects of independent variables (cash withdrawal services, deposit services, account statements, bill payments services, and balance enquiry services) on the dependent variable (financial performance measured using five year average of return on assets) as recommended by Jackson (2009). According to Faraway (2002) and Brooks (2014) multiple linear regression analysis is chosen when the dependent model is continuous and when there are more than one independent variables. It was therefore relevant in testing the effect of Saccolink debit card services (independent variables) on the financial performance of SACCOs (dependent variable) in this study due to the continuous nature of the dependent variable. This is depicted by the model shown below:

$$\mathbf{Y= \beta_0+ \beta_1X_1+ \beta_2X_2+ \beta_3X_3+\beta_4X_4+ \beta_4X_5 + \varepsilon}$$

Where,

Y= Financial performance of the Deposit-Taking SACCO based on return on assets

X_1= Cash withdrawal services

X_2= Deposits services

X_3= Account statement services

X_4= Bill payment services

X_5= Balance enquiry services

ε=error term (accounting for variables other than those specified in the model that explains changes in the dependent variable)

β_0 = constant term

β_1- β_5 = coefficients of the independent variables

The empirical model above was used to generate coefficients and t-statistics for each independent variable and its corresponding p-values. To determine whether each independent variable had a significant effect on the performance of SACCOs, its corresponding coefficient was tested to check whether it was statistically different from zero. If the p-value of a given coefficient was less than the chosen significance level (0.05), the null hypothesis was rejected and a conclusion drawn confirming that the corresponding variable significantly affected the performance of SACCOs.

4. RESULTS AND DISCUSSION

4.1 Response Rate

After checking the completeness and non-response cases of questionnaires, 68 questionnaires were correctly filled representing a response rate of 79.1 percent. 10 Unreturned questionnaires represented 11.6 percent, while the 8 disqualified questionnaires (due either to incompleteness or inconsistencies) represented 9.3 percent. According to Babbie (2004), Mugenda and Mugenda (2003), and Saunders, Lewis, and Thornhill (2007), response rates of 50, 60, and 70 percent are considered adequate, good, and very good, respectively.. The response rate of 79.1 percent observed in this study was therefore very good and, as such, sufficient for further analysis and for drawing conclusions based on the stipulated research objectives. Furthermore, the study's response rate was acceptable as it compared well with similar studies conducted in Kenya by Kidombo (2007), who achieved a response rate of 64.0 percent, Magutu (2013) who achieved a response rate of 75 percent, and Waithaka, Kimani, Korir, and Muathe (2013), who had a response rate of 69 percent.

4.2 Regression Results

Tables 1, 2 and 3 summarize the regression analysis results.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.637[a]	.405	.357	.50644
a. Predictors: (Constant), Balance Enquiry Services, Deposit Services, Account Statements Services, Bill Payment Services, Cash Withdrawal Services				

Table 1: Summary Results of Regression Model

As shown in Table 1, R^2 was 0.405, indicating that the five independent variables (cash withdrawal services, deposit services, account statements, bill payments services, and balance enquiry services) explained 40.5 percent of variations in the financial performance of SACCOs. This implied that 59.5 percent of variations in the financial performance of SACCOs was explained by other variables outside the model.

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	10.843	5	2.169	8.455	.000[b]
	Residual	15.902	62	.256		
	Total	26.745	67			
a. Dependent Variable: Return on Assets						
b. Predictors: (Constant), Balance Enquiry Services, Deposit Services, Account Statements Services, Bill Payment Services, Cash Withdrawal Services						

Table 2: Anova Results for Model Significance

To check the statistical significance of the overall regression model, the Anova test was used as shown in Table 2. The overall model was statistically significant ($F_{(5,62)}=8.455$, $p=0.000$), implying that the study's independent variables (cash withdrawal services, deposit services, account statements, bill payments services, and balance enquiry services) explained the variations in the dependent variable (financial performance of Deposit-Taking SACCOs) and therefore the model was adequate for further hypotheses testing.

Independent Variables	**Beta (Coefficients)**	**T-Statistic**	**P-Values**	**Decision**
Constant	2.167	6.231	.000	
Cash Withdrawal Services	.019	0.163	.047	Reject null hypothesis
Deposits Services	.045	0.651	.025	Reject null hypothesis
Account Statement Services	.032	0.444	.031	Reject null hypothesis
Bill Payment Services	.322	3.657	.011	Reject null hypothesis
Balance Enquiry Services	.038	.429	.032	Reject null hypothesis

Table 3: Regression Coefficients

From the regression analysis show in Table 3, it was found that all the Saccolink debit card services (cash withdrawal services, deposit services, account statements, bill payments services, and balance enquiry services) had a statistically significant positive effect on the financial performance of Deposit-Taking SACCOs in Kenya. Therefore, the study concluded that the utilization of Saccolink debit card services positively affected the financial performance of Deposit-Taking SACCOs in Kenya. The relationship between Deposit-Taking SACCOs and the Cooperative Bank of Kenya is therefore critically important to the continued improved performance of the SACCO sub-sector. Following the wide acceptance and usage of Saccolink debit cards amongst SACCO members, the features of these debit cards should continuously be enhanced by information technology experts from the Co-operative Bank of Kenya in close collaboration with the information technology teams from the Deposit-Taking SACCOs. Enhanced Saccolink debit cards will translate into more utilization by members of the

Deposit-Taking SACCOs and, hence, more transactions will translate into more returns for SACCOs (as returns are pegged on the number of transactions made). On the other hand, academic institutions should be encouraged to find more potential for debit cards, including the area of electronic commerce and mobile payments. Finally, the management boards of the Deposit-Taking SACCOs that have not connected to the Saccolink system should initiate the uptake process to also enhance their performance.

5. CONCLUSION

The study showed the important role played by debit card services on the SACCO subsector. In general, the study builds on the existing body of knowledge through empirical contributions on the use of debit cards and their effect on organizational performance. The study was unique in the sense that it integrated utilization stream models and task-technology fit stream to explain the effects of debit cards services on organizational performances Information systems research has mainly focused on the adoption of technology based on utilization stream models such as the technology acceptance model, information systems success model, and innovation diffusion model, with an assumption that performance impacts will be felt after the technology is adopted. As a theoretical contribution, this study extended this convention by combining the utilization stream (information system success model) with the task-technology fit stream (task technology fit theory). This study was however limited to Deposit-Taking SACCOs in Kenya and therefore the findings are only generalizable to these Deposit-Taking SACCOs. Additionally, the study assumed that Saccolink debit card services had already been adopted and were being utilized within the Deposit-Taking SACCOs. However, different SACCOs could have been at the various stages of adoption (i.e., awareness, interest, evaluation, trial, adoption, and post-adoption). Future studies should therefore consider the stage of adoption, as it could affect how a technology is conceptualized and used in an organization.

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